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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/356,241 07/16/99 BATES

C IBM/96

EXAMINER

TM02/0924

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TRUONG, C
ART UNIT

PAPER NUMBER

2172
DATE MAILED:

09/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/356,241

Applicant(s)

BATES ET AL.

Examiner

Cam-Y Truong

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27, 38 and 48-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27, 38 and 48-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The applicants have added claims 48-66 the amendment filled on 7/9/01. Claims 1-27, 38, and 48-66 are pending in this Office Action.
2. Applicant's arguments filed on 7/9/01 have been fully considered but they are not persuasive.

Applicants argued that Shoham reference did not disclose detecting multiple accesses. The examiner disagreed because Shoham teaches that tracking of the visited nodes including an optional time stamp so that these nodes can be selectively revisited in the future depending upon the system parameters. Similarly, these nodes may be periodically revisited since related information resources of interest are likely to be added (col. 10, lines 45-60). It is clear that the system detects multiple access.

In addition to the discussion in claim 1, claim 14 recites "the selectively updating the user feedback parameter associated therewith in response to detecting multiple accesses thereto by a user" as block 124d keeps track of the visited nodes including an optional time stamp so that these nodes can be selectively revisited in the future depending upon the system parameters. Similarly, these nodes may be periodically revisited since related information resources of interest are likely to be added (col. 10, lines 45-60).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-3, 6-16, 19-27, 49-56-59, and 66 are rejected under 35 U.S.C.102(e) as being unpatentable over Shoham (USP5855015).

As to claims 1 and 14, Shoham teaches the claimed limitations:

“in response to a search request, generating a result set including identifications of a subset of a plurality of records in a database that match the search request” as the user enter a specific or general query at block 120, or select an information resource of interest to initialize the heuristics, the system will determine which information resources to present to the user. This information shows that the system generate information resources what match with user input (fig. 4, col. 8, lines 25-31);

“ordering the identifications of the records in the result set using a user feedback parameter associated with each record in the result set” as 20 information resources each having a ranking between zero and ten indicative of their relevance or “interestingness” to the user. The heuristics developed based on the training examples continually adapt to the user’s interests as determined by the user feedback (col. 8, lines 5-20);

“for each of the plurality of records, selectively updating the user feedback parameter associated therewith in response to detecting multiple accesses thereto by a user” as due to the rapidly changing nature of information resources on the Web, the selection process may retrieve the information resource by copying it to the local

Art Unit: 2172

processor storage unit for later presentation to the user. Block 124d keeps track of the visited nodes including an optional time stamp so that these nodes can be selectively revisited in the future depending upon the system parameters. Similarly, these nodes may be periodically revisited since related information resources of interest are likely to be added (col. 10, lines 45-60).

As to claims 2, 16, and 49, Shoham teaches the claimed limitation "updating the user feedback parameter includes increasing a weight for the user feedback parameter associated with a first record in response to the number of times a user accesses the first record" as (col. 10, lines 45-60).

As to claims 3, 15, and 50, Shoham teaches the claimed limitation "increasing a weight for the user feedback parameter associated with a first record in response to the first record being the most recently accessed record in the result set" as a best-first search was utilized, where the system accepts the user feedback such as a score or rating, for each information resource represented. The search heuristic evaluated a score for each page by taking the dot product $V \cdot M$, where V represents the page and M the current model. Each page V was viewed by the user and received an evaluation e_i (an integer in the range $[-5, +5]$, given this information the weights of M were updated. This is supplied the relevance feedback to the system. The evaluation scores given by the users were recorded daily (col. 12, lines 9-35; col. 4, lines 42-52).

As to claims 6, 19, and 51, Shoham teaches the claimed limitation "generating the result set includes accessing a search request data structure that includes a plurality of search request records, each including a search request parameter identifying a unique combination of keywords, and a result set parameter identifying a subset of records in the database that match the unique combination of keywords" as (fig. 1, col. 5, lines 62-67; col. 6, lines 13-20).

As to claims 7, 20, and 52, Shoham teaches the claimed limitations

"partitioning the result set into a plurality of relevance groups, with each relevance group including identifications of records having like relevancies to the search request" as determining which information sources to present to the user. This information indicates partitioning or selecting relevance information, which matches to the user's request (fig. 4, col. 8, lines 25-31);

"sorting the identifications or records within each relevance group according to the user feedback parameters associated therewith" as (col. 8, lines 14-20).

As to claims 8, 21, and 53, Shoham teaches the claimed limitations

"each record in database includes a Uniform Resource Identifier (URL) that identifies a document stored on a computer network" as information sources are authored utilizing the HTML and the hyperlinks are defined utilizing Uniform Resource Locators (URL's). Also HTTP is utilized to explore and retrieve the associated information resource specified by the URL (col. 6, lines 10-20);

"wherein selectively updating the user feedback parameter includes selectively updating the user feedback parameter associated with a first record in the database in response to detecting multiple accesses to the document stored at the URL associated with the first record" as (col. 12, lines 19-67).

As to claims 9, 22, and 54, Shoham teaches the claimed limitation

"generating the result set includes generating at least one hypertext document including a plurality of hypertext links, each of which configured to access a document identified by a record in the result set" as (fig. 1, col. 5, lines 62-67; col. 6, lines 13-20).

As to claims 10 and 23, Shoham teaches the claimed limitations

"generating a script associated with at least one of the records in the result set" as using HTML to structure the information which associated with the results (col. 10, lines 24-37);

"the script configured to generate a notification that the associated record has been accessed by a user" (col. 10, lines 24-37);

"detecting multiple accesses to the document stored at the URL associated with the first record includes receiving the notification" as (col. 12, lines 19-67).

As to claims 11, 24, and 55, Shoham teaches the claimed limitations:

"a memory within which is resident a plurality of records from a database, each record associated with a user feedback parameter" as in memory 82 stores information source which is associated with user feedback as shown in fig 4-5 (col. 7, lines 5-30);

"a first program, resident in the memory, the first program configured to, in response to a search request, generate a result set including identifications of a subset of the plurality of records that match the search request, and to order the identifications of the records in the result set using the user feedback parameter associated with each record in the result set" as (col. 8, lines 8-24);

"a second program, resident in the memory, the second program configured to, for each of the plurality of records, selectively update the user feedback parameter associated therewith in response to multiple accesses thereto by a user" as (col. 12, lines 19-67).

As to claims 12, 25, and 56, Shoham teaches the same claimed limitations as claim 11 except the claimed limitation "a signal bearing medium bearing the first and second programs" as it is clear that there is a signal medium to synchronize between those programs (col. 12, lines 19-67).

As to claims 13, 26, 57, and 66, Shoham teaches the claimed limitation "the signal bearing medium includes at least one of a recordable medium" as the physical computer network which contains a hard disk (fig. 1, col. 6, lines 20-25), "a transmission type medium" as transmission Control Protocol/Internet Protocol (col. 6, line 38-39).

As to claim 27, Shoham teaches the same claimed limitations as claims 1 and 2.

As to claim 38, Shoham teaches the same claimed limitations as 1 and 6.

As to claim 58, Shoham teaches the same claimed limitations as 14.

As to claim 59, Shoham teaches the same claimed limitations as claims 1 and 2.

5. Claims 64 and 65 are rejected under 35 U.S.C.102(e) as being unpatentable over Bates et al (or hereinafter "Bates") (USP 6088707).

As to claims 64 and 65, Bates teaches the claimed limitations

"a memory within which is resident a search request data structure" as (col. 5, lines 28-40), "the search request data structure including a plurality of search request records" as (col. 6, lines 28-37), "each search request record including a search request identifier identifying a unique combination of keywords, and a result set identifier identifying a subset of a plurality of records in a database that match the unique combination of keywords" as (col. 6, lines 30-65; col. 7, lines 1-10);

"a program, resident in the memory, the program configured to, in response to a search request that specifies a plurality of keywords" as (col. 5, lines 30-55), "search the search request data structure to locate a search request record including a search request identifier that matches the plurality of keywords in the search request, and to generate a result set identifying the subset of records identified in the result set identifier in the located search request record" as (col. 6, lines 30-67; col. 7, lines 1-45).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5, 17-18, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoham in view of the publication, "Content-Based, Collaborative Recommendation," Marko Balabanovic and Yoav Shoham, Proceeding of the ACM March 1997, Communications of the ACM, Vol. 40, No. 3, or hereinafter "T2".

As to claims 4, 17, and 48, Shoham teaches the claimed limitations:

"a plurality of weights, each weight associated with a keyword in the associated record" as the search heuristic is a approach which is to extract fit number of keywords from each document; the user's interests were represented with keywords and associated weight (col. 11, lines 16-20). Shoham does not teach the claimed limitation "ordering the records in the result set using the user feedback parameter associated with each record in the result set includes ordering the records using any weight associated with a keyword matching the search request". However, T2 teaches (page 6, col. Right, lines 22-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply the teaching of the results of the user's rankings of the pages from the four sources to shoham's system in order to prove consistent over long periods of time, both for a given user and between users (page. 5, col. Left, lines 53-57).

As to claims 5 and 18, Shoham teaches the claimed limitation "increasing a first weight for the user feedback parameter associated with a first record in response to receipt of a search request matching a first keyword associated with the first weight" as (col. 11, lines 1-20).

8. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shoham in view of Bates et al (or hereinafter "Bates") (USP 6088707).

As to claim 60, Shoham does not teaches the claimed limitation "a list of record identifiers identified by the result set identifier of a first search request record based upon the copies of the user feedback parameters associated with the subset of records". However, Bates teaches the above claimed limitation in col. 6, lines 30-55; col. 17, lines 20-27; col. 18, lines 63-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply Bates' teaching of a listed list or other data structure is searched to determine whether the target document for the hypertext link definition is present in the list. Each document is identified by an identifier such a uniform resource locator (URL) or other suitable the document resides. The trigger data function updates the reference data for document based upon the current contents of the document. The entire contents of a document may be stored in the reference data and compared to the current content to determine the percentage change. It may be possible to utilize a cached copy of a document for use in calculating the change. Retrieving information regarding the last user that has modified the

document, e.g., through search for an HTML tag with the document to Shoham's system in order to monitor the update status of documents in which one or more specific notification criteria are utilized to provide a flexible and customizable manner of determining whether a document contains updated information of interest to a user and to store data for processing history information.

9. Claim 61-63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shoham in view of Bates et al (or hereinafter "Bates") (USP 6088707) and further in view of Kanai et al (USP 5864679).

As claim 61, Shoham does not teach the claimed limitation "a table, wherein each search request record comprises an entry in the table, and wherein the result set identifier for each search request record comprises a linked list of record identifiers". However, Kanai teaches that the transaction table 126 is in a form shown in Fig. 29 in which each entry has five fields for registering the type of transaction (col. 23, lines 29-35). Besides, Bates teaches that a visited list or other data structure is searched to determine whether the target document for the hypertext link definition is present in the list. Each document is identified by an identifier such as a uniform resource locator (col. 6, lines 30-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply Kanai's teaching of the transaction table 126 in a form shown in Fig. 29 in which each entry has five fields for registering the type of transaction and Bates' teaching of a visited list or other data structure is searched to determine whether the target document for the hypertext link definition is present in the

list. Each document is identified by an identifier such as a uniform resource locator to Shoham's system in order to monitor the update status of documents in which one or more specific notification criteria are utilized to provide a flexible and customizable manner of determining whether a document contains updated information of interest to a user and to store data for processing history information.

As to claim 62, Shoham does not teach the claimed limitation "sorting the table entries responsive to frequency of access thereto". However, Kanai et al teaches the above claimed limitation in col. 51, lines 60-67; col. 52, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply Kanai's teaching of sorting the entries of correlation information memory table 202 according to the access frequency to Shoham's system in order to make the routing of the transactions in view of the newly determined data arrangement scheme and the frequency of occurrences of the transaction (col. 4, lines 55-65).

As to claim 63, Shoham does not teach the claimed limitation "adding a new entry to the table....remove an entrythreshold". However, Kanai teaches the above claimed limitation in col. 41, lines 50-65; col. 45, lines 5-15. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to apply Kanai's teaching of adding the new access and removing the entry with the lowest access frequency to Shoham's system in order to produce a correlation information indicating all sets of data which are accessed together in each series processing carried

Art Unit: 2172

out by the processor according to the access requests received by receiving and to determine a new data arrangement of the data in the data storage regions (col. 5, lines 45-55).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam-Y Truong whose telephone number is (703-605-1169). The examiner can normally be reached on Mon-Fri from 8:00AM to 4:00PM.

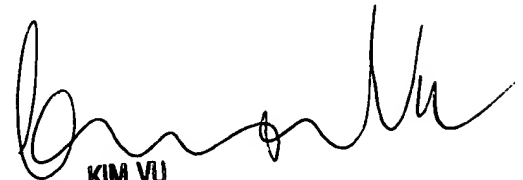
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu, can be reached on (703-305-4393). The fax phone numbers for the organization where this application or proceeding is assigned is (703-308-9051).

Art Unit: 2172

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-3900).

CY

September 5, 2001



KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100